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10/821,871	04/12/2004	Nobuo Kurataka	50103-598	1846

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EXAMINER

FALASCO, LOUIS V

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,871

Applicant(s)

KURATAKA ET AL.

Examiner

Louis Falasco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/12/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

PAPERS RECEIVED

The Amendment of 12/29/04 is acknowledged.

Applicants' claim for Priority from Provisional Application 60293839 in parent application SN 10/079,516 now patent 6,723,198 is acknowledged .

CLAIMS

The claims are 14 to 20.

All claims are under consideration.

ACTIONS

Statutory Basis

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Objections

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show Fig. 1 a being Prior Art as described in the specification.

Detail essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The specification is objected to because of a missing application part. There is no Brief Description of the Drawings see 608.01(g) and 37 CFR 1.84.

Appropriate correction is required.

Rejections

3. Claims 14 - 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of claim 14 and preambles of its dependant claims 15-17 call for *a structure for use in the manufacture of a patterned thin film magnetic recording medium* However the articles of claims 14 - 17 are part of a servo-patterned thin film magnetic recording medium. It is suggested the claim 14 and dependant claims preambles be amended to read

-- A servo-patterned thin film magnetic medium comprising: --

or similar language to reflect the subject matter of the claims as part of a servo-patterned thin film magnetic recording medium, obviating this rejection.

4. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang et al** U.S. Patent No. 6746754 in view of **Wang et al** U.S. Patent No. US 6623788

Wang et al '754 teaches a magnetic recording medium having a non-magnetic substrate (item 10 of Fig. 1 of '754) and a sol-gel derived coat for providing a servo pattern (col. 5 lns 49, 50 of '754). **Wang et al '754** does not teach the sol-gel-based derived layer as a produced by employing a stamper. However **Wang et al '788**

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teaches the embossed servo pattern in the sol-gel produced by a stamping process. In **Wang et al '788** the servo pattern is a negative image of embossments in the stamper (col. 5 lns 2-6 of **Wang et al '788**).

As to claim 20: both **Wang et al '754** and '788 teaches the sol-gel- derived SiO₂ layer produced from a partially dried sol-gel layer having a density and hardness comparable to glass - see col. 5 lns 44- 47 of '754 and col. 5 lns 30, 31 of '788.

It would therefore have been obvious to one of ordinary skill in the art at the time of applicants invention to adapt the recording medium produced by a stamper of **Wang et al '754** in the **Wang et al '788** magnetic recording medium to improve servo pattern configuration of high areal density magnetic recording medium to improve the servo track formed (col. 4 lns 2,3 of **Wang et al '788**).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

5. Claims 19 and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1, 3, 4 and 6 of **Wang et al** U.S. Patent No. 6746754 alone, or in view of the teachings of **Wang et al** U.S. Patent No. US 6623788.

Wang et al US 6746754 *claims* a magnetic recording medium having a non-magnetic substrate possessing a surface (*cf* claim 1 part "(a)", claim 6 part "(a)"); and sol-gel derived means (*cf* claim 1 part "(b)", claim 6 part "(b)"); for providing a servo pattern (*cf* claim 4). **Wang et al** US 6746754 differs in that it is not in the claims that what is produced is *"a servo pattern which precisely replicates a master servo pattern formed in a surface of a stamper"*. There are no limits as to how exact precise replication needs be to meet the claim limitation on *precisely* and **Wang et al** US 6746754 supports the claims of patent 6746754 in the disclosure by the magnetic recording medium having *"improved mechanically texturing and embossing of the servo pattern"* (col. 4 lns 19,20). This would appear to be within the bounds as instantly claimed or substantially the same structure as instantly claimed in claims 19 and 20.

It has been held that where claimed and prior art products are identical or substantially identical in structure or in composition, or are produced by identical processes a case of anticipation or a *prima facie* case of obviousness has been established and the burden of proof is shifted to applicant to show that the prior art products do not necessary or inherently possess the characteristic of a claimed product whether the rejection is based upon *"inherency"* under 35 USC 102 or on a *"prima facie obviousness"* under 35 USC 103 jointly or alternately. *In re Best* 562 F2d 1252, 1255, 195

USP 430, 433 (CCPA 1977); In re Ludke, 58 CCPA 1159, 441 F2d at 212-13, 169 USPQ 563 (1971); In re Brown, 59 CCPA 1036, 459 F. 2d 531, 173 USPQ 685 (1972).

Alternatively, **Wang et al** US 6623788 points out that texturing a servo pattern includes a product of stamping (col. 7 lns 28,29) to obtain medium having a non-magnetic substrate a sol-gel derived product useful in magnetic recording having a high areal density.

It would therefore have been obvious to one of ordinary skill in the art to modify the recording medium claimed in **Wang et al** 6746754 by including a servo pattern produced by a stamper to improve servo pattern configuration of high areal density in magnetic recording medium (col. 4 lns 2,3 **Wang et al** US 6623788).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

REASONS FOR ALLOWABILITY

6. Claims 14 to 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Reasons for Allowability of claims 14 to 18 over prior art

The following is an examiner's statement of reasons for allowance if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The primary reason for allowance of the claims is the inclusion in the claims of the structure of a patterned thin film magnetic recording medium, composed of a non-magnetic substrate and a layer of a glass or glass-like material on said major surface of said substrate, where the layer of glass or glass-like material includes an exposed surface having a pattern of recesses in structure for use in a patterned thin film magnetic recording medium by process steps including providing a stamper having a recess-patterned surface with a negative image of the pattern of recesses to be formed in said medium then forming a layer of a spin-coated partially dried sol-gel material on the recess-patterned stamper surface, where the layer has a micro-porous structure of silica (SiO₂) particles with solvents saturated in its micro-pores. Further having the layer in conformal contact with the recess-patterned surface of the stamper and exposed a second opposite surface and urging the substrate surface into contact with the exposed second surface of partially dried sol-gel material. This is followed by removing the recess-patterned stamper surface from contact with the layer of partially dried sol-gel material, leaving while the layer of partially dried sol-gel material in contact with the surface of the substrate. In this way the layer of partially dried sol-gel material is transferred to the major surface of said substrate, such that said first surface of the layer of partially dried sol-gel material is exposed and it

includes a positive image of the pattern of recesses. Subsequently converting the layer of partially dried sol-gel material to a glass or glass-like layer while preserving that pattern of recesses in the exposed first surface in all of the claims.

Applicants have also demonstrated evidence of criticality and unexpected results, in of a structure for use in the manufacture of a patterned thin film magnetic recording medium as demonstrated in Fig. 3 (A-C) as explained at page 16 lines 9-16 for unobviously improving the replication of a servo pattern of the stamper on the structure for a magnetic recording medium.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

OTHER REFERENCES

7. References cited in the parent application, now US Patent 6723198, are cited in this action as being of interest only.

CONCLUSION

8. The claims are 14 to 20 all claims have been rejected.

- Claims 14 to 18 have been rejected under 35 USC 112 second paragraph.
- Claims 19 and 20 have been rejected under 35 USC 103 (a) and under nonstatutory double patenting.

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INQUIRES


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, PhD whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol D. Chaney, PhD can be reached at (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CAROL CHANEY
PRIMARY EXAMINER